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# TO THE KNOWLEDGE OF DIGGER WASPS (HYMENOPTERA: CRABRONIDAE) OF NAKHCHIVAN AUTONOMOUS REPUBLIC OF AZERBAIJAN

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**Summary**. The data on 187 species of 42 genera of digger wasps of the family Crabronidae collected in Nakhchivan Autonomous Republic of Azerbaijan in 2018–2019 are given. Of them, 116 species are recorded for the fauna of Azerbaijan for the first time. Now 231 species of Crabronidae are known from this country. A new synonymy is proposed: *Ectemnius persicus* (Kohl, 1888) = *E. walteri* (Kohl, 1889), **syn. n.** Redescription of female and description of hitherto unknown male of *Oxybelus latifrons* Kohl, 1892 are given.

**Key words**: Spheciformes, fauna, distribution, synonymy, Caucasus, Palaearctic region.

**М. В. Мокроусов, М. Ю. Прощалыкин, Х. А. Алиев, М. М. Магеррамов. К познанию роющих ос (Hymenoptera: Crabronidae) Нахичеванской Автономной Республики Азербайджана // Дальневосточный энтомолог. 2019. N 394. С. 1-24.**

**Резюме**. Приводятся данные о 187 видах роющих ос из 42 родов семейства Crabronidae, собранных в Нахичеванской Автономной Республике Азербайджана в 2018–2019 гг. Впервые для фауны Азербайджана указывается 116 видов. К настоящему времени фауна Азербайджана насчитывает 231 вид семейства Crabronidae. Установлена новая синонимия: *Ectemnius persicus* (Kohl, 1888) = *E. walteri* (Kohl, 1889), **syn. n.**; даны переописание самки и описание ранее неизвестного самца *Oxybelus latifrons* Kohl, 1892.

## INTRODUCTION

The present paper is part of a series of current studies of bees (Kuhlmann & Proshchalykin, 2015, 2016; Proshchalykin *et al*., 2019) and wasps (Maharramov *et al*., 2018; Fateryga *et al*., 2019) of the territory of the Nakhchivan Autonomous Republic of Azerbaijan. Digger wasps are one of the least-studied groups occurring in this territory as well as in Azerbaijan. So far only about 115 species of Crabronidae have been recorded from Azerbaijan mainly in taxonomic papers (see below).

Based on a comprehensive study of specimens, we here list 187 species of 42 genera of digger wasps, with 116 species recorded from Azerbaijan for the first time. Now 231 species of Crabronidae are known from this country. The male of *Oxybelus latifrons* Kohl, 1892 is here described for the first time and new synonymy is established for *Ectemnius persicus* (Kohl, 1888) = *E. walteri* (Kohl, 1889).

## MATERIAL AND METHODS

This paper is based on the material (more than 2000 specimens), collected in July 2018 and June 2019 in the Nakhchivan Autonomous Republic (Azerbaijan) by M.Yu. Proshchalykin, Kh.A. Aliyev and M.M. Maharramov in 38 localities. Geographical coordinates and administrative locations of collection sites are as follows:

**Azerbaijan:** *Nakhchivan Autonomous Republic*: **2018: 1** – Babek, Shikhmakhmud, 39°15'N 45°25'E, 940 m, a) 20.VII; b) 30.VII; **2** – Shakhbuz, Kulus, 39°22'N 45°36'E, 1360 m, 21.VII; **3** – Shakhbuz, 4 km SE Kechili, 39°20'N 45°45'E, 2300 m, 21.VII; **4** – Shakhbuz, Kechili, 39°22'N 45°43'E, 1800 m, 22.VII; **5** – Shakhbuz, Shakhbuzkend, 39°23'N 45°32'E, 1140 m, a) 22–23.VII; b) 30.VII; **6** – Shakhbuz, Salasuz, 39°20'N 45°45'E, 1125 m, 23, 25.VII; **7** – Shakhbuz, Bichenek, 39°31'N 45°46'E, 2000 m, 23–24.VII; **8** – Shakhbuz, Kolani, 39°28'N 45°43'E, 1300 m, 24.VII; **9** – Shakhbuz, Batabat, 39°31'N 45°47'E, 2100 m, 24.VII; **10** – Shakhbuz, Zarnatun, 39°31'N 45°46'E, 1550 m, 24–25.VII; **11** – Shakhbuz, Ayrinj, 39°25'N 45°35'E, 1240 m, 25.VII; **12** – Julfa, 9 km N Julfa, 39°02'N 45°36'E, 900 m, 26.VII; **13** – Julfa, Gulistan, 38°58'N 45°36'E, 740 m, 26.VII; **14** – Julfa, Goydara, 39°09'N 45°40'E, 1150 m, 26.VII; **15** – Julfa, Gazanchi, 39°13'N 45°41'E, 1300 m, 26–27.VII; **16** – Julfa, Milakh, 39°15'N 45°43'E, 1430 m, 27.VII; **17** – Julfa, Bayahmad, 39°15'N 45°52'E, 2180 m, 27.VII;

**18** – Ordubad, Aghdara, 39°06'N 45°54'E, 2000 m, 28.VII; **19** – Ordubad, Nurgut, 39°13'N 45°53'E, 1900 m, 29.VII; **20** – Shakhbuz, Shakhbuz, 39°23'N 45°32'E, 1160 m, 30.VII; **2019:** **21** – Babek, Sirab, 39°18'N 45°31'E, 1090 m, 10.VI; **22** – Babek, 3 km NE Sirab, 39°18'N 45°32'E, 1250 m, a) 10.VI; b) 12.VI; c) 18.VI; d) 21.VI; **23** – Babek, Payiz, 39°26'N 45°22'E, 1225 m, 11.VI; **24** – Babek, Yukhari Buzgov, 39°31'N 45°22'E, 1720 m, 11.VI; **25** – Babek, Shikhmakhmud, 39°15'N 45°25'E, 940 m, a) 11.VI; b) 14.VI; **26** – Babek, Gahab, 39°15'N 45°31'E, 1045 m, 12.VI; **27** – Babek, Goynuk, 39°18'N 45°40'E, 1680 m, 12.VI; **28** – Sharur, Akhura, 39°33'N 45°13'E, 1640 m, 13.VI; **29** – Kangarli, Garabaglar, 39°25'N 45°13'E, 1270 m, 13.VI; **30** – Kangarli, Chalkhangara, 39°25'N 45°15'E, 1445 m, 13.VI; **31** – Shakhbuz, Shakhbuzkend, 39°23'N 45°32'E, 1140 m, 14.VI; **32** – Shakhbuz, Zarnatun, 39°31'N 45°46'E, 1550 m, a) 14.VI; b) 18.VI; **33** – Shakhbuz, Bichenek, 39°31'N 45°46'E, 2000 m, 14.VI; **34** – Julfa, Gazanchi, 39°13'N 45°41'E, 1300 m, 15.VI; **35** – Julfa, Milakh, 39°15'N 45°43'E, 1430 m, 15.VI; **36** – Julfa, 2 km S Teyvaz, 39°14'N 45°46'E, 1880 m, 15.VI; **37** – Julfa, Teyvaz, 39°15'N 45°46'E, 1645 m, 15.VI; **38** – Julfa, 9 km N Julfa, 39°02'N 45°36'E, 900 m, 16.VI; **39** – Julfa, Gulistan, 38°58'N 45°36'E, 740 m, 16.VI; **40** – Julfa, Daridagh, 38°59'N 45°40'E, 900 m, a) 16–17.VI; b) 20.VI; **41** – Ordubad, Aghdara, 39°06'N 45°54'E, 2000 m, 17.VI; **42** – Shakhbuz, Gomur, 39°27'N 45°44'E, 1790 m, 18.VI; **43** – Nakhichevan, 39°13'N 45°24'E, 905 m, 17–18.VI; **44** – Shakhbuz, Kechili, 39°22'N 45°43'E, 1800 m, 19.VI; **45** – Shakhbuz, Kulus, 39°21'N 45°37'E, 1395 m, 19.VI; **46** – Shakhbuz, Gizil Gishlag, 39°28'N 45°35'E, 1460 m, 19.VI; **47** – Shakhbuz, Badamli, 39°25'N 45°31'E, 1290 m, 19.VI; **48** – Julfa, Dize, 39°01'N 45°45'E, 880 m, 20.VI; **49** – Julfa, 5 km N Dize, 39°03'N 45°45'E, 965 m, 20.VI.

The images were processed with a digital camera Cannon 50D attached to a Carl Zeiss Stemi 508 stereomicroscope. Composite images with an extended depth of field were created from stacks of images using the software Helicon Focus v. 6.0.18. The final illustrations were post-processed for sharpness, contrast and brightness using Adobe® Photoshop® software. Specimens were deposited in the collection of the Federal Scientific Center of the East Asia Terrestrial Biodiversity of the Far East Branch of the Russian Academy of Sciences, Vladivostok, Russia and the private collection of M.V. Mokrousov, Nizhny Novgorod, Russia. The classification of Crabronidae follows Pulawski (2019). A detailed distribution can be found in Antropov *et al*. (2017) and Pulawski (2019). New records for Azerbaijan are asterisked (*).

## TAXONOMY

### ***Oxybelus latifrons*** **Kohl, 1892**

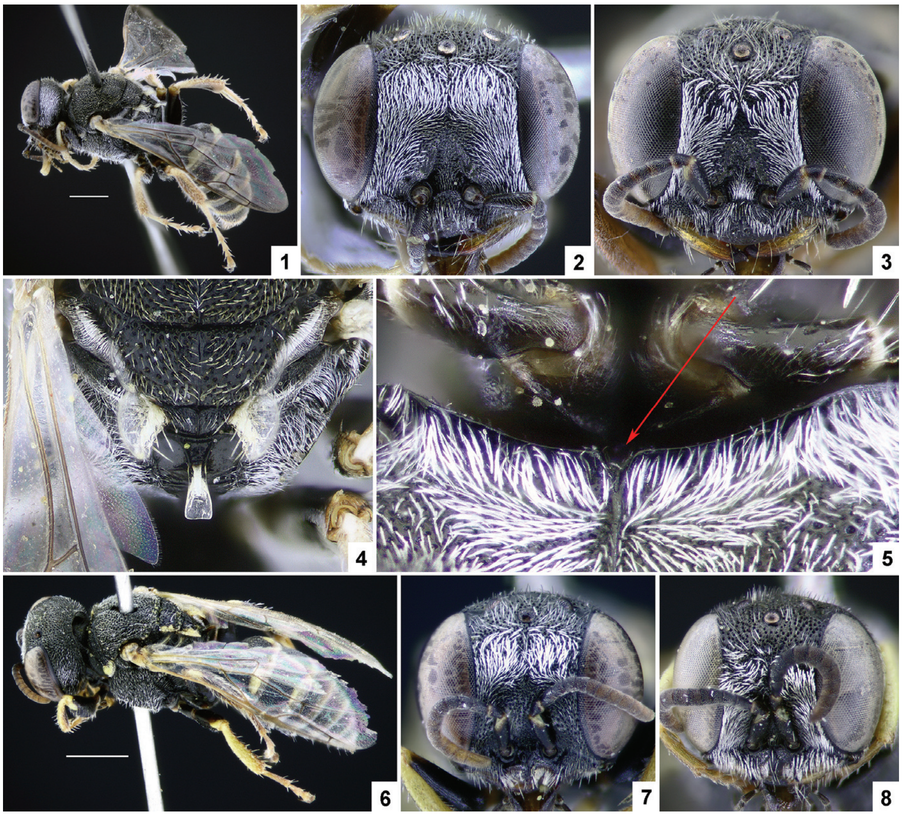
*Oxybelus latifrons* Kohl, 1892: 209, ♀ (holotype: ♀, Azerbaijan, Araxesthal (=Arax valley) [Naturhistorisches Museum, Wien, Austria]; examined).

ADDITIONAL MATERIAL. **Azerbaijan**: *Nakhchivan Autonomous Republic*, Babek, Sirab, 39°18'N 45°31'E, 1090 m, 10.VI 2019, 1 ♀, 3 ♂ (M.Yu. Proshchalykin, Kh.A. Aliyev, M.M. Maharramov).

NOTES. This little known species was described from the single female collected in Azerbaijan by H. Leder and was not included to the keys (Verhoeff, 1948; Fæster, 1949; Móczár, 1958; Pulawski, 1978). Therefore, we consider it necessary to give illustrations, a brief redescription and a differential diagnosis of this species. Description of male is given for the first time.

DESCRIPTION. **Female** (Fig. 1). Total body length 6.9 mm. Black; mandible yellow and reddish with black apex; antenna mostly reddish with more light apex; pronotum with small

yellow spots on humeral tubercles only; metanotal squama and mucron transparent with whitish pattern; tibiae and tarsi light yellow, tibiae partly reddish with darkened in the inner side; femora black, yellow at apex only, without yellow spot below; tegula and vein bases whitish, tegula without dark spots; tergae I–IV with tranverse yellowish lateral spots, tergite V with two close spots; apical margin of terga I–V discolored with reddish tint; apical segment reddish.




Figs 1–8. *Oxybelus latifrons* Kohl (1, 2, 4–7) and *O. haemorrhoidalis* Olivier (3, 8). 1–5 – females; 6–8 – males; 1, 6 – habitus, lateral view; 2, 3, 7, 8 – head, frontal view; 4 – meso- and metanotum, propodeum, dorsal view; 5 – acetabular carinae, ventral view. Scale bar: 1 mm.

Frons wide, minimal distance between eyes about 0.63 of head height (Fig. 2). Frons between ocelli with not dense punctuation with shine interspaces. Omaulus and acetabular carina raised and sharp; acetabular carina with deep notch in the middle (Fig. 5). Metanotal squama bifid. Mucron slightly expanding with truncate apex (Fig. 4). Sternum II with large shiny interspaces, especially in medial half, punctures small. Pubescence erect on vertex and semierect on mesonotum, with a yellowish tint; on the rest of the head and thorax with appressed silvery setae.

**Male** (Fig. 6). Total body length 6.2 mm. Black; mandible yellow with black apex; antenna mostly brown with more light apex; pronotum with yellow spots on humeral tubercles only;

metanotal squama and mucron transparent with yellowish pattern, at one sample metanotum yellow laterally; fore and mid tibiae yellow with darkened in the inner side; hind tibia brown with yellow base and stripe; tarsi reddish yellow, femora black, yellow at apex, mid femur with deformed yellow spot at apex; tegula and vein bases whitish, tegula without dark spots; tergae I–II with tranverse yellouwish lateral spots; apical margin of terga I–VI discolored with reddish tint; apical segment reddish.

Omaulus and acetabular carina raised and sharp; acetabular carina with deep notch in the middle, slightly narrower than female.

Frons narrower than female, minimal distance between eyes about 0.5 of head height (Fig. 2). Frons between ocelli with not dense punctuation with shine interspaces.

Metanotal squama bifid. Mucron slightly expanding with truncate or slightly rounded apex. Sternum II with large shiny interspaces, punctures small but more numerous than female. Pubescence silvery, erect on vertex, semierect or appressed on the rest of the head and thorax, less developed than female.

COMPARISON. Differs from all known Palaearctic species of the genus by deep notch in the middle of the acetabular carina (Fig. 5). In morphology and coloration (red apical tergum) is closest to *O. haemorrhoidalis* Olivier, *O. quatuordecimnotatus* Jurine and *O. variegatus* Wesmael from which differs by wider front (Fig. 2 *vs* Fig. 3 and Fig. 7 *vs* Fig. 8), sparse punctures between posterior ocelli, and from *O. quatuordecimnotatus* Jurine also by sparse punctures on metasomal sternum II.

DISTRIBUTION. Azerbaijan. – Turkey.

### ***Ectemnius*** **(*Hypocrabro*)** ***persicus*** **(Kohl, 1888)**

*Crabro persicus* Kohl, 1888: 134, ♀ (holotype: ♀, Iran, Shiraz [Naturhistorisches Museum, Wien, Austria: examined).

*Crabro walteri* Kohl in Kohl & Handlirsch, 1889: 281, ♂ (holotype: ♂, Turkmenistan, Askhabad [Naturhistorisches Museum, Wien, Austria]; probably lost). **Syn. n.**

ADDITIONAL MATERIAL. **Azerbaijan**: *Nakhchivan Autonomous Republic*, Shakhbuz, 4 km SE Kechili, 2300 m, 21.VII 2018, 1 ♂; Shakhbuz, Kechili, 1800 m, 22.VII 2018, 1 ♂; Shakhbuz, Shakhbuzkend, 1140 m, 22–23.VII 2018, 3 ♂; idem, 30.VII 2018, 2 ♂; Shakhbuz, Zarnatun, 1550 m, 24–25.VII 2018, 4 ♀, 3 ♂; idem, 14.VI 2019, 1 ♀, 1 ♂; idem, 18.VI 2019, 1 ♀; Shakhbuz, Ayrinj, 1240 m, 25.VII 2018, 1 ♂; Babek, Shikhmakhmud, 940 m, 14.VI 2019, 1 ♂ (M.Yu. Proshchalykin, Kh.A. Aliyev, M.M. Maharramov).

NOTES. The assumption of conspecificity *Ectemnius persicus* (Kohl, 1888) and *E. walteri* (Kohl, 1889), was made earlier (Yildirim et *al*., 2016: 47). Also three males and four females were collected by us together in one locality (Shakhbuz, Zarnatun). Based on the study of the type of *Crabro persicus* Kohl and additional specimens of males and females both species we combine these sexes to one species.

DISTRIBUTION. *Azerbaijan. – Russia (Volgograd Prov.), Turkey, Iran, Turkmenistan.

## LIST OF THE SPECIES

## Family Crabronidae

### ***Ammatomus coarctatus*** **(Spinola, 1808)**

*Ammatomus coarctatus*: Pulawski, 1973: 280 (Tash-Bulag near Nukha [=Sheki]; Martouki).

MATERIAL EXAMINED. 1a – 2 ♀, 3 ♂; 5b – 2 ♂; 7 – 2 ♀, 1 ♂; 15 – 1 ♂; 21d – 1 ♂; 26 – 1 ♂.

***Ammatomus rogenhoferi* (Handlirsch, 1888)**
*Gorytes rogenhoferi*: Handlirsch, 1888: 341 (Helenendorf [=Goygol]).
*Ammatomus rogenhoferi*: Pulawski, 1973: 276; Nemkov, 1995a: 183 (Tash-Bulag near Nukha [=Sheki]).

MATERIAL EXAMINED. 5a – 1 ♀; 7 – 1 ♀; 21 – 1 ♀, 1 ♂; 22a – 2 ♀, 3 ♂; 22b – 2 ♀, 2 ♂; 22d – 2 ♀; 25a – 1 ♂; 25b – 2 ♀, 4 ♂; 26 – 1 ♀; 27 – 1 ♂; 28 – 5 ♂; 32a – 3 ♂; 32b – 1 ♀, 7 ♂; 34 – 1 ♀, 2 ♂; 35 – 3 ♂; 37 – 1 ♀, 3 ♂; 45 – 3 ♂; 46 – 1 ♂; 47 – 1 ♂; 49 – 1 ♀.

***_Ammatomus rufonodis_ (Radoszkowski, 1877)**

MATERIAL EXAMINED. 6 – 2 ♂; 21 – 2 ♂.

***_Ammoplanus hofferi_ Šnoflák, 1943**

MATERIAL EXAMINED. 10 – 1 ♂.

***_Ammoplanus rjabovi_ Gussakovskij, 1931**

MATERIAL EXAMINED. 22a – 1 ♂.

***_Argogorytes hispanicus_ (Mercet, 1906)**

MATERIAL EXAMINED. 42 – 1 ♂.

***_Argogorytes mystaceus_ (Linnaeus, 1761)**

MATERIAL EXAMINED. 41 – 2 ♀.

***_Astata affinis jerichoensis_ Pulawski, 1957**

MATERIAL EXAMINED. 22b – 1 ♂; 26 – 1 ♀; 40a – 1 ♀, 2 ♂; 40b – 4 ♀, 1 ♂; 45 – 1 ♂.

***_Astata apostata_ Mercet, 1910**

MATERIAL EXAMINED. 10 – 1 ♂; 20 – 1 ♂; 21 – 1 ♀; 47 – 1 ♀.

***_Astata boops_ (Schrank, 1781)**

MATERIAL EXAMINED. 7 – 1 ♂; 8 – 1 ♂; 9 – 3 ♀, 5 ♂; 17 – 1 ♂; 22a – 1 ♂; 37 – 1 ♀; 40b – 2 ♂.

***_Astata costae_ A. Costa, 1867**

MATERIAL EXAMINED. 3 – 1 ♀; 15 – 1 ♀; 22a – 1 ♂; 23 – 1 ♂; 29 – 1 ♀; 32a – 2 ♂; 37 – 1 ♀; 49 – 1 ♂.

***_Astata graeca_ de Beaumont, 1965**

MATERIAL EXAMINED. 9 – 1 ♀; 32b – 1 ♂; 37 – 1 ♂; 44 – 1 ♀; 46 – 1 ♂; 47 – 1 ♀.

***Astata kashmirensis* Nurse, 1909**
*Astata rufipes*: Gussakovskij, 1927: 289 (Yelizavetpol' [=Ganja]).

MATERIAL EXAMINED. 21 – 3 ♂; 22a – 1 ♂; 28 – 1 ♂; 32b – 5 ♂.

***_Astata jucunda_ Pulawski, 1959**

MATERIAL EXAMINED. 26 – 1 ♀; 31 – 1 ♂.

***Astata miegii* Dufour, 1861**

MATERIAL EXAMINED. 10 – 1 ♀, 1 ♂; 21 – 1 ♀; 22a – 2 ♀, 7 ♂; 22b – 3 ♂; 22c – 2 ♀; 22d – 3 ♂; 26 – 1 ♀, 2 ♂; 28 – 4 ♂; 30 – 3 ♀; 32a – 3 ♂; 34 – 1 ♂; 37 – 1 ♂; 40b – 1 ♀; 48 – 1 ♂; 49 – 1 ♂.

***Astata minor* Kohl, 1885**

MATERIAL EXAMINED. 3 – 1 ♀; 5a – 1 ♂; 9 – 4 ♀, 5 ♂; 10 – 1 ♀; 28 – 2 ♂; 31 – 1 ♂; 32a – 1 ♂; 32b – 2 ♀, 3 ♂; 37 – 1 ♀, 2 ♂; 40b – 1 ♂; 41 – 2 ♂.

***Bembecinus cyprius* de Beaumont, 1954**

MATERIAL EXAMINED. 22c – 4 ♂; 26 – 2 ♂; 40a – 1 ♂; 49 – 1 ♂.

***Bembecinus gynandromorphus* (Handlirsch, 1892)**

MATERIAL EXAMINED. 28 – 4 ♂; 32b – 2 ♂.

***Bembecinus iranicus* Schmid-Egger, 2004**

MATERIAL EXAMINED. 4 – 1 ♂; 5a – 1 ♀, 8 ♂; 5b – 3 ♀, 6 ♂; 11 – 1 ♂; 13 – 1 ♀; 15 – 1 ♀, 1 ♂; 21 – 1 ♂; 22c – 3 ♂; 26 – 1 ♂; 31 – 1 ♂; 39 – 3 ♂.

***Bembecinus peregrinus* (F. Smith, 1856)**

MATERIAL EXAMINED. 18 – 1 ♀; 22a – 2 ♀, 1 ♂; 22b – 8 ♀; 22c – 1 ♀; 23 – 6 ♂; 26 – 1 ♀; 28 – 1 ♂; 32b – 3 ♀; 34 – 2 ♂; 35 – 1 ♀; 37 – 6♀, 1 ♂; 40a – 2 ♀; 44 – 1 ♀, 1 ♂; 45 – 2 ♀; 47 – 1 ♀.

***Bembecinus tridens* (Fabricius, 1781)**

*Bembecinus tridens*: Schmid-Egger, 2004: 35 (Lerik, Zuvand; Astara); Nemkov, 2012b: 5 (near Baku, Inzhirnaya).

MATERIAL EXAMINED. 4 – 3 ♀, 3 ♂; 5a – 4 ♀, 18 ♂; 5b – 5 ♀, 7 ♂; 8 – 2 ♀, 3 ♂; 10 – 3 ♀, 22 ♂; 15 – 1 ♀, 6 ♂; 18 – 1 ♀, 4 ♂; 19 – 3 ♂; 20 – 1 ♀; 21 – 1 ♀, 21 ♂; 22a – 2 ♀, 1 ♂; 22b – 1 ♀, 1 ♂; 23 – 4 ♂; 25b – 4 ♀; 26 – 1 ♂; 27 – 1 ♂; 31 – 6 ♂; 32a – 5 ♂; 32b – 2 ♀, 10 ♂; 35 – 2 ♀; 37 – 2 ♀, 3 ♂; 41 – 3 ♂; 45 – 1 ♂; 49 – 2 ♂.

***Bembecinus validior* Gussakovskij, 1952**

MATERIAL EXAMINED. 26 – 1 ♀; 47 – 1 ♀; 49 – 2 ♂.

***Bembix bicolor* Radoszkowski, 1877**

MATERIAL EXAMINED. 11 – 1 ♂; 22a – 1 ♀; 22b – 2 ♂; 22c – 1 ♀; 22d – 1 ♀; 32b – 1 ♂; 40a – 1 ♀; 46 – 1 ♀.

***Bembix bidentata* Vander Linden, 1829**

*Bembex bidentata*: Handlirsch, 1893b: 775 (Murut [=Ucbulaq]).
*Bembix bidentata*: Nemkov, 2016: 9 (Agdere; Kudula).

MATERIAL EXAMINED. 3 – 3 ♀, 1 ♂; 10 – 1 ♀, 5 ♂; 11 – 3 ♂; 15 – 1 ♂; 16 – 1 ♂; 22a – 2 ♂; 22b – 1 ♂; 32b – 1 ♀, 1 ♂; 45 – 1 ♂.

***Bembix diversipes* F. Morawitz, 1889**

*Bembex diversipes*: Handlirsch, 1893b: 712 (Helenendorf [=Goygol]).

MATERIAL EXAMINED. 41 – 1 ♂.

***Bembix eburnea* Radoszkowski, 1877**

MATERIAL EXAMINED. 22b – 1 ♂; 41 – 1 ♀; 49 – 1 ♀, 2 ♂.

***Bembix integra* Panzer, 1801**

MATERIAL EXAMINED. 3 – 1 ♀; 8 – 1 ♀; 9 – 1 ♀; 14 – 1 ♀.

***Bembix oculata* Panzer, 1801**
*Bembix oculata*: Nemkov, 2016: 16 (Gumbashi; Balaken).

MATERIAL EXAMINED. 10 – 1 ♂; 13 – 1 ♀; 38 – 1 ♀; 49 – 1 ♂.

***Bembix rostrata* (Linnaeus, 1758)**
*Bembix rostrata*: Nemkov, 2016: 22 (Belokany).

MATERIAL EXAMINED. 36 – 1 ♀; 46 – 1 ♂.

***Brachystegus scalaris* (Illiger, 1807)**

MATERIAL EXAMINED. 34 – 1 ♂.

***Brachystegus incertus* (Radoszkowski, 1877)**
*Brachystegus incertus*: Nemkov, 2003: 4 (Julfa; 35 km north of Nakhichevan).

MATERIAL EXAMINED. 16 – 1 ♀; 22a – 5 ♂; 22b – 1 ♀, 1 ♂; 22d – 3 ♂; 26 – 3 ♀; 40a – 1 ♂.

***Cerceris albicolor* Shestakov, 1918**
*Cerceris albicolor*: Schmidt, 2000: 143 (Helenendorf [=Goygol]; Baku).

MATERIAL EXAMINED. 5b – 2 ♂; 13 – 1 ♀; 16 – 1 ♂.

***Cerceris arenaria* (Linnaeus, 1758)**

MATERIAL EXAMINED. 22a – 2 ♂; 28 – 1 ♂.

***Cerceris bicincta* Klug, 1835**

MATERIAL EXAMINED. 22a – 1 ♂; 29 – 1 ♀; 36 – 1 ♂.

***Cerceris bupresticida* Dufour, 1841**
*Cerceris bupresticida*: Shestakov, 1916: 230 (Ordubad).

MATERIAL EXAMINED. 1b – 1 ♂; 5a – 2 ♂; 5b – 1 ♀, 3 ♂; 6 – 3 ♂; 7 – 1 ♂; 16 – 1 ♂; 18 – 19 ♂; 19 – 2 ♂; 21 – 5 ♂; 22a – 3 ♂; 25b – 1 ♂; 26 – 1 ♂; 32b – 2 ♂; 37 – 1 ♂; 40b – 1 ♂; 41 – 2 ♀; 47 – 2 ♂.

***Cerceris circularis* (Fabricius, 1804)**

MATERIAL EXAMINED. 1b – 1 ♂; 5a – 1 ♀.

***Cerceris conica* Shestakov, 1918b**
*Cerceris conica*: Dollfuss, 2018: 1137 (Gobustan).

MATERIAL EXAMINED. 32b – 1 ♀; 41 – 4 ♂; 44 – 1 ♀.

***Cerceris eryngii* Marquet, 1875**

MATERIAL EXAMINED. 22a – 5 ♂; 22b – 3 ♀, 2 ♂; 26 – 1 ♂; 27 – 3 ♂; 41 – 1 ♂.

***Cerceris fimbriata* (Rossi, 1790)**

MATERIAL EXAMINED. 49 – 1 ♀.

***Cerceris flavicornis* Brullé, 1833**

MATERIAL EXAMINED. 21 – 1 ♂; 22a – 6 ♂; 22b – 2 ♂; 26 – 1 ♀; 29 – 1 ♂; 30 – 1 ♂; 32a – 2 ♂; 39 – 4 ♂; 45 – 1 ♂; 49 – 2 ♂.

***Cerceris fodiens* Eversmann, 1849**

*Cerceris opalipennis*: Kohl, 1888: 136; Shestakov, 1916: 230 (Helenendorf [=Khanlar]).
*Cerceris fodiens fodiens*: Schmidt, 2000: 64 (Helenendorf [=Khanlar]).

MATERIAL EXAMINED. 21 – ♂; 22a – 10 ♂; 22b – 1 ♀, 4 ♂; 22c – 1 ♂; 22d – 1 ♂; 26 – 5 ♀, 3 ♂; 31 – 1 ♂; 32a – 1 ♂; 39 – 1 ♀.

***Cerceris lunata* A. Costa, 1867**

MATERIAL EXAMINED. 5a – 2 ♂.

***Cerceris media* Klug, 1835**

*Cerceris capitata*: Shestakov, 1916: 235 (Karadonlu).

MATERIAL EXAMINED. 13 – 1 ♂; 26 – 1 ♂; 39 – 1 ♂.

***Cerceris odontophora* Schletterer, 1887**

*Cerceris odontophora*: Schmidt, 2000: 94 (Azerbaijan).

MATERIAL EXAMINED. 5a – 1 ♀; 22a – 3 ♂; 22b – 2 ♂; 32a – 1 ♂; 32b – 1 ♀; 37 – 1 ♂.

***Cerceris quadricincta* (Panzer, 1799)**

*Cerceris quadricincta*: Shestakov, 1916: 235 (Yelizavetpol' [=Ganja]; Ordubad).

MATERIAL EXAMINED. 4 – 4 ♀, 1 ♂; 7 – 4 ♂; 18 – 2 ♀, 7 ♂; 19 – 2 ♂; 32b – ♀; 34 – 1 ♀, 1 ♂; 41 – 2 ♂; 46 – 1 ♀.

***Cerceris quinquefasciata* (Rossi, 1792)**

*Cerceris quinquefasciata*: Shestakov, 1916: 235 (Aliaut, Djevad Distr.).

MATERIAL EXAMINED. 9 – 1 ♀; 27 – 2 ♂; 32a – 1 ♂; 32b – 3 ♂; 46 – 1 ♂.

***Cerceris rubida* (Jurine, 1807)**

*Cerceris rubida*: Shestakov, 1916: 234 (Karadonlu).

MATERIAL EXAMINED. 6 – 3 ♂; 16 – 1 ♀; 22a – 1 ♂; 22c – 2 ♂; 25b – 1 ♂; 26 – 6♀, 4 ♂; 36 – 1 ♂; 39 – 4 ♂; 47 – 1 ♂.

***Cerceris rybyensis* (Linnaeus, 1771)**

MATERIAL EXAMINED. 22a – 1 ♀; 22c – 1 ♀; 44 – 1 ♀.

***Cerceris sabulosa* (Panzer, 1799)**

*Cerceris emarginata*: Shestakov, 1916: 231 (Yelizavetpol' [=Ganja]; Adjikend).

MATERIAL EXAMINED. 1a – 1 ♂; 1b – 1 ♀; 4 – 2 ♀, 1 ♂; 5a – 1 ♀, 4 ♂; 5b – 2 ♂; 7 – 1 ♂; 8 – 1 ♀; 10 – 3 ♂; 13 – 1 ♀; 15 – 2 ♂; 16 – 3 ♂; 18 – 2 ♀, 19 – 4 ♂; 21 – 1 ♂; 22a – 1 ♂; 22b – 1 ♂; 25b – 1 ♂; 26 – 1 ♀, 1 ♂; 32b – 2 ♂; 34 – 4 ♂; 37 – 3 ♂; 39 – 1 ♀, 1 ♂; 41 – 2 ♀, 7 ♂.

***Cerceris specularis* A. Costa, 1867**

MATERIAL EXAMINED. 21 – 4 ♀, 3 ♂; 22a – 7 ♀, 6 ♂; 22b – 10 ♀, 2 ♂; 22c – 5 ♀, 2 ♂; 23 – 4 ♂; 26 – 2 ♀; 27 – 8 ♂; 28 – 2 ♂; 29 – 1 ♀, 1 ♂; 30 – 1 ♂; 31 – 1 ♀, 1 ♂; 32a – 7 ♂; 32b – 11 ♂; 36 – 2 ♂; 37 – 3 ♂; 44 – 2 ♂; 45 – 4 ♀, 1 ♂; 46 – 1 ♀.

***Cerceris straminea* Dufour, 1854**

MATERIAL EXAMINED. 1b – 1 ♀; 13 – 3 ♂.

***Cerceris stratiotes* Schletterer, 1887**

MATERIAL EXAMINED. 21 – 1 ♂; 22a – 2 ♂; 32b – 1 ♀, 1 ♂; 37 – 1 ♂; 41 – 2 ♂; 47 – 1 ♀; 49 – 1 ♀.

***Crossocerus* (*Ablepharipus*) *assimilis* (F. Smith, 1856)**

MATERIAL EXAMINED. 7 – 1 ♀.

***Crossocerus* (*Ablepharipus*) *podagricus* (Vander Linden, 1829)**

MATERIAL EXAMINED. 18 – 1 ♀; 34 – 1 ♀.

***Crossocerus* (*Crossocerus*) *esau* de Beaumont, 1967**

MATERIAL EXAMINED. 41 – 1 ♂.

***Didineis lunicornis* (Fabricius, 1798)**

MATERIAL EXAMINED. 7 – 1 ♀, 3 ♂.

***Diodontus luperus* Shuckard, 1837**

MATERIAL EXAMINED. 18 – 1 ♀.

***Diodontus minutus* (Fabricius, 1793)**

MATERIAL EXAMINED. 21 – 1 ♂; 22b – 1 ♀.

***Dryudella tricolor eurygnatha* (Pulawski, 1967)**

MATERIAL EXAMINED. 9 – 2 ♂; 21 – 1 ♀; 22a – 1 ♀; 22d – 1 ♂; 32b – 1 ♀, 1 ♂.

***Ectemnius* (*Clytochrysus*) *sexcinctus* (Fabricius, 1775)**

MATERIAL EXAMINED. 19 – 1 ♂.

***Ectemnius* (*Ectemnius*) *rugifer* (Dahlbom, 1845)**

MATERIAL EXAMINED. 19 – 2 ♀, 1 ♂.

***Ectemnius* (*Hypocrabro*) *continuus* (Fabricius, 1804)**
*Crabro vagus*: Schulz, 1904: 99 (Lenkoran; Talysh).

MATERIAL EXAMINED. 18 – 1 ♂; 19 – 1 ♀; 32a – 1 ♂.

***Ectemnius* (*Hypocrabro*) *meridionalis* (A. Costa, 1867)**

MATERIAL EXAMINED. 7 – 1 ♀; 40a – 1 ♂; 40b – 1 ♀.

***Ectemnius* (*Hypocrabro*) *rubicola* (Dufour and Perris, 1840)**

MATERIAL EXAMINED. 9 – 1 ♀.

***Ectemnius* (*Metacrabro*) *fossorius* (Linnaeus, 1758)**

MATERIAL EXAMINED. 8 – 1 ♀.

***Ectemnius* (*Metacrabro*) *kriechbaumeri* (Kohl, 1879)**

MATERIAL EXAMINED. 3 – 2 ♀; 41 – 1 ♂.

***Ectemnius* (*Thyreocerus*) *crassicornis* (Spinola, 1808)**

*Ectemnius crassicornis*: Dollfuss, 2004: 768 (Gobustan).

MATERIAL EXAMINED. 5a – 2 ♀, 2 ♂; 5b – 2 ♂; 10 – 3 ♀, 1 ♂; 18 – 2 ♀, 2 ♂; 19 – 1 ♀; 21 – 2 ♂; 22b – 1 ♂; 22c – 1 ♂; 24 – 1 ♂; 25b – 1 ♀; 27 – 1 ♀, 1 ♂; 40b – 1 ♀; 42 – 1 ♀, 1 ♂.

***Ectemnius* (*Thyreocerus*) *massiliensis* (Kohl, 1883)**

MATERIAL EXAMINED. 32a – 2 ♂.

***Entomognathus brevis* (Vander Linden, 1829)**

MATERIAL EXAMINED. 4 – 2 ♀; 18 – 4 ♂.

***Entomognathus dentifer* (Noskiewicz, 1929)**

MATERIAL EXAMINED. 28 – 3 ♂.

***Entomosericus concinnus* (Dahlbom, 1845)**

MATERIAL EXAMINED. 22a – 9 ♀; 22b – 2 ♀; 23 – 3 ♂; 31 – 1 ♂.

***Gastrosericus waltlii* Spinola, 1839**

MATERIAL EXAMINED. 5b – 1 ♂; 10 – 1 ♀; 22c – 3 ♂; 25b – 1 ♀; 40a – 1 ♀.

***Gorytes albidulus* (Lepeletier de Saint Fargeau, 1832)**

*Gorytes albidulus*: Nemkov, 1990: 686 (Ordubad).

MATERIAL EXAMINED. 24 – 1 ♂; 28 – 1 ♂; 32a – 1 ♂; 32b – 1 ♀, 4 ♂.

***Gorytes hebraeus* de Beaumont, 1953**

MATERIAL EXAMINED. 28 – 1 ♀, 2 ♂.

***Gorytes nigrifacies* (Mocsary, 1879)**

*Gorytes nigrifacies*: Schmid-Egger, 2002: 181 (Yardimli, Avash).

MATERIAL EXAMINED. 28 – 3 ♀; 32a – 3 ♀; 32b – 1 ♀; 44 – 1 ♀.

***Gorytes pleuripunctatus* A. Costa, 1859**

*Gorytes pleuripunctatus*: Schulz, 1904: 97 (Talysh); Schmid-Egger, 2002: 182 (S Baku, Kura bride N Salyany).

*Gorytes pleuripunctatus pleuripunctatus*: Nemkov, 1990: 689 (Tash-Bulag near Nukha [=Sheki]; Djedgarabad; Zatakala).

*Gorytes pleuripunctatus barbarus*: Nemkov, 1990: 689 (Ordubad; Kudula).

MATERIAL EXAMINED. 32b – 1 ♂.

***Gorytes quinquecinctus* (Fabricius, 1793)**
*Gorytes proximus*: Handlirsch, 1893a: 281; 1895: 924 (Helenendorf [=Goygol]).

MATERIAL EXAMINED. 28 – 2 ♂; 32a – 1 ♂; 34 – 3 ♀, 10 ♂.

****Gorytes quinquefasciatus* (Panzer, 1798)**

MATERIAL EXAMINED. 37 – 1 ♂.

****Gorytes schmidti* Schmid-Egger, 2002**

MATERIAL EXAMINED. 28 – 6 ♂; 43 – 1 ♂; 48 – 1 ♂.

***Gorytes sulcifrons* (A. Costa, 1867)**
*Gorytes sulcifrons*: Yildirim *et al*., 2016: 15 (Azerbaijan).

MATERIAL EXAMINED. 10 – 1 ♂; 18 – 1 ♂.

****Harpactus affinis* (Spinola, 1808)**

MATERIAL EXAMINED. 28 – 4 ♀, 1 ♂; 32a – 1 ♀; 32b – 1 ♀; 41 – 2 ♀.

***Harpactus elegans* (Lepeletier de Saint Fargeau, 1832)**
*Harpactus elegans*: Nemkov, 1997: 19 (Azerbaijan).

MATERIAL EXAMINED. 23 – 1 ♂; 26 – 1 ♀; 28 – 3 ♂; 32a – 1 ♂; 32b – 1 ♂; 34 – 1 ♀, 6 ♂.

****Harpactus laevis* (Latreille, 1792)**
MATERIAL EXAMINED. 32b – 1 ♂; 43 – 1 ♀.

****Harpactus tauricus* Radoszkowski, 1884**

MATERIAL EXAMINED. 34 – 1 ♂; 43 – 1 ♀.

***Harpactus transcaucasicus* Nemkov, 1994**
*Harpactus transcaucasicus*: Nemkov, 1994: 69 (35 km north of Nakhichevan); 1996: 1208 (near Nakhichevan).

MATERIAL EXAMINED. 22b – 1 ♀; 27 – 13 ♀, 15 ♂; 32a – 1 ♀, 16 ♂; 32b – 3 ♀, 17 ♂; 34 – 2 ♂; 35 – 1 ♀, 1 ♂; 37 – 2 ♀, 1 ♂; 41 – 1 ♂; 42 – 1 ♀; 44 – 1 ♀.

***Harpactus transiens* A. Costa, 1887**
*Harpactus consanguinaeus*: Nemkov, 1997: 19 (Azerbaijan).

MATERIAL EXAMINED. 23 – 1 ♂; 24 – 1 ♂; 28 – 19 ♂; 32a – 1 ♀; 32b – 1 ♂; 34 – 1 ♀, 3 ♂; 42 – 1 ♂.

****Holotachysphex mochii* (de Beaumont, 1947)**

MATERIAL EXAMINED. 22b – 2 ♂.

****Hoplisoides latifrons* (Spinola, 1808)**

MATERIAL EXAMINED. 13 – 1 ♀; 22a – 1 ♂.

***Hoplisoides punctuosus* (Eversmann, 1849)**
*Hoplisoides punctuosus*: Nemkov, 1995b: 134 (Zuvant [=Gosmalijion]).

MATERIAL EXAMINED. 27 – 2 ♀, 11 ♂; 28 – 1 ♂; 32b – 3 ♂; 42 – 1 ♂.

***Larra anathema* (Rossi, 1790)**

MATERIAL EXAMINED. 13 – 1 ♂; 16 – 1 ♀, 1 ♂; 25b – 1 ♂.

***Lestica clypeata* (Schreber, 1759)**

MATERIAL EXAMINED. 1a – 1 ♀; 1b – 1 ♂; 4 – 3 ♀, 4 ♂; 5b – 2 ♂; 8 – 2 ♀; 10 – 2 ♂; 13 – 1 ♂; 17 – 2 ♂; 18 – 5 ♂; 19 – 1 ♂; 20 – 1 ♀, 1 ♂; 21 – 1 ♂; 25a – 1 ♀; 27 – 3 ♂; 28 – 1 ♂; 29 – 1 ♂; 31 – 3 ♀; 32b – 1 ♂; 36 – 1 ♂; 41 – 1 ♀; 44 – 1 ♀.

***Lestica subterranea* (Fabricius, 1775)**

MATERIAL EXAMINED. 22b – 1 ♀; 27 – 1 ♀; 28 – 1 ♂; 32a – 1 ♀, 2 ♂; 37 – 1 ♀, 1 ♂; 41 – 1 ♀, 1 ♂; 44 – 1 ♀.

***Lindenius albilabris* (Fabricius, 1793)**

MATERIAL EXAMINED. 4 – 1 ♀.

***Lindenius anatolicus* de Beaumont, 1967**

MATERIAL EXAMINED. 23 – 1 ♀.

***Lindenius iranius* Leclercq, 1975**

MATERIAL EXAMINED. 37 – 1 ♀.

***Liris niger* (Fabricius, 1775)**

MATERIAL EXAMINED. 14 – 1 ♀; 15 – 1 ♂; 22d – 1 ♀; 24 – 1 ♀; 34 – 1 ♀; 40a – 1 ♀; 40b – 2 ♀; 42 – 1 ♀; 46 – 1 ♀.

***Miscophus bicolor* Jurine, 1807**

MATERIAL EXAMINED. 34 – 2 ♂; 43 – 1 ♂.

***Miscophus pretiosus* Kohl, 1884**

MATERIAL EXAMINED. 34 – 2 ♂.

***Nysson barrei* Radoszkowski, 1893**

MATERIAL EXAMINED. 21 – 1 ♂.

***Nysson chevrieri* Kohl, 1879**

MATERIAL EXAMINED. 32b – 1 ♀; 34 – 4 ♀, 1 ♂.

***Nysson decemmaculatus* Spinola, 1807**

*Synnevrus decemmaculatus*: Nemkov, 2001: 8 (Tash-Bulag near Nukha [=Sheki]).

MATERIAL EXAMINED. 22a – 3 ♂, 2 ♀; 22b – 1 ♂; 23 – 2 ♂; 28 – 1 ♂; 31 – 2 ♂; 32a – 2 ♂; 32b – 1 ♂.

***Nysson epeoliformis* F. Smith, 1856**

*Synnevrus epeoliformis*: Nemkov, 2001: 5 (Ganja; Tash-Bulag near Nukha [=Sheki]; Dzhafarabad; Kuduly; Nakhchivan; 10 km NE Julfa).

MATERIAL EXAMINED. 1a – 1 ♀; 3 – 1 ♀; 22a – 1 ♂; 25b – 1 ♂; 47 – 2 ♂.

***Nysson fulvipes* A. Costa, 1859**

MATERIAL EXAMINED. 28 – 2 ♀; 42 – 1 ♂.

***Nysson guichardi* de Beaumont, 1967**

MATERIAL EXAMINED. 22b – 3 ♀.

***Nysson harveyi* de Beaumont, 1967**

MATERIAL EXAMINED. 34 – 1 ♂.

***Nysson interruptus* (Fabricius, 1798)**

MATERIAL EXAMINED. 32b – 1 ♀.

***Nysson maculosus* (Gmelin, 1790)**

MATERIAL EXAMINED. 23 – 2 ♀; 25b – 1 ♀; 28 – 1 ♀, 3 ♂; 32b – 1 ♀; 34 – 8 ♀, 6 ♂.

***Nysson militaris* Gerstaecker, 1867**

MATERIAL EXAMINED. 31 – 1 ♂; 34 – 1 ♂.

***Nysson paralias* Standfuss, 2010**

MATERIAL EXAMINED. 34 – 2 ♂.

***Oxybelus aurantiacus* Mocsáry, 1883**

MATERIAL EXAMINED. 18 – 1 ♀; 21 – 1 ♀.

***Oxybelus bipunctatus* Olivier, 1812**

MATERIAL EXAMINED. 4 – 1 ♂; 5a – 3 ♂; 5b – 1 ♀; 10 – 1 ♀, 5 ♂.

***Oxybelus dissectus* Dahlbom, 1845**

MATERIAL EXAMINED. 21 – 4 ♂; 22b – 1 ♂; 28 – 1 ♂; 29 – 1 ♂; 32b – 1 ♂; 34 – 1 ♂; 40a – 1 ♂; 40b – 1 ♂; 41 – 1 ♂.

***Oxybelus haemorrhoidalis* Olivier, 1812**

*Oxybelus haemorrhoidalis*: Dollfuss, 2008: 474 (Gobistan).

MATERIAL EXAMINED. 21 – 1 ♂; 25b – 1 ♀; 37 – 1 ♀.

***Oxybelus latro* Olivier, 1812**

MATERIAL EXAMINED. 10 – 1 ♂; 22a – 2 ♂; 22b – 1 ♂; 25b – 2 ♂; 26 – 2 ♂; 28 – 1 ♀, 2 ♂; 32b – 3 ♂; 43 – 1 ♀.

***Oxybelus lineatus* (Fabricius, 1787)**

MATERIAL EXAMINED. 4 – 1 ♂; 32b – 1 ♀; 41 – 1 ♂.

***Oxybelus maculipes* F. Smith, 1856**

MATERIAL EXAMINED. 5a – 3 ♂; 25b – 1 ♀; 28 – 1 ♀, 4 ♂; 29 – 1 ♀; 34 – 1 ♂; 44 – 4 ♂.

***Oxybelus mucronatus* (Fabricius, 1793)**

MATERIAL EXAMINED. 21 – 4 ♀, 16 ♂; 22b – 4 ♂; 22d – 2 ♀, 1 ♂; 26 – 1 ♂; 27 – 1 ♂; 28 – 1 ♀, 8 ♂; 29 – 1 ♂; 32a – 1 ♀, 4 ♂; 32b – 1 ♀, 5 ♂; 34 – 1 ♀, 3 ♂; 39 – 1 ♂; 40a – 4 ♂; 40b – 1 ♀, 2 ♂; 41 – 1 ♂.

***Oxybelus quatuordecimnotatus* Jurine, 1807**

MATERIAL EXAMINED. 21 – 6 ♂; 32b – 1 ♀, 1 ♂; 39 – 2 ♂.

***Oxybelus subspinosus* Klug, 1835**

MATERIAL EXAMINED. 18 – 1 ♀, 1 ♂; 21 – 1 ♀, 2 ♂; 22a – 1 ♂; 22b – 1 ♂; 26 – 1 ♂; 27 – 4 ♂; 28 – 4 ♂; 29 – 1 ♂; 32a – 1 ♀, 2 ♂; 32b – 1 ♀, 1 ♂; 34 – 2 ♂; 40a – 1 ♀; 40b – 2 ♂; 41 – 1 ♂.

***Oxybelus uniglumis* (Linnaeus, 1758)**

MATERIAL EXAMINED. 28 – 2 ♀, 2 ♂; 32a – 1 ♂; 32b – 1 ♀, 1 ♂; 41 – 1 ♀.

***Oxybelus variegatus* Wesmael, 1852**

MATERIAL EXAMINED. 21 – 1 ♂; 22b – 1 ♀; 26 – 2 ♂; 28 – 2 ♂; 32a – 1 ♀; 32b – 1 ♂; 44 – 1 ♀.

***Palarus variegatus* (Fabricius, 1781)**

*Palarus variegatus*: Pulawski & Prentice, 2008: 460 (Sabirabad; Samur River on Baku-Derbent road).

MATERIAL EXAMINED. 18 – 1 ♂.

***Passaloecus gracilis* (Curtis, 1834)**

MATERIAL EXAMINED. 45 – 1 ♂.

***Passaloecus singularis* Dahlbom, 1844**

MATERIAL EXAMINED. 9 – 1 ♀.

***Pemphredon fabricii* (M. Müller, 1911)**

MATERIAL EXAMINED. 32b – 1 ♀.

***Pemphredon lethifer* (Shuckard, 1837)**

*Pemphredon lethifer*: Dollfuss, 1995: 980 (Helenendorf [=Goygol]); van der Smissen, 2003: 70 (Azerbaijan).

MATERIAL EXAMINED. 28 – 1 ♀.

***Pemphredon rugifer* (Dahlbom, 1844)**

MATERIAL EXAMINED. 9 – 2 ♂; 22a – 1 ♀; 27 – 1 ♂; 28 – 2 ♀, 1 ♂.

***Philanthus triangulum* (Fabricius, 1775)**

MATERIAL EXAMINED. 3 – 2 ♂; 5a – 2 ♂; 5b – 1 ♀, 1 ♂; 6 – 1 ♂; 7 – 4 ♂; 13 – 5 ♀, 4 ♂; 15 – 1 ♀, 8 ♂; 16 – 4 ♂; 18 – 4 ♂; 22b – 1 ♀; 25a – 1 ♂; 26 – 1 ♀, 2 ♂; 32b – 1 ♂; 39 – 3 ♂; 42 – 1 ♂; 43 – 3 ♂; 44 – 1 ♂; 46 – 1 ♂.

***Philanthus variegatus* Spinola, 1839**

MATERIAL EXAMINED. 13 – 2 ♀, 1 ♂; 15 – 1 ♂; 39 – 3 ♀; 49 – 1 ♀.

***Pison atrum* (Spinola, 1808)**
*Pison atrum*: Gussakovskij, 1937: 629 (Tash-Bulag near Nukha [=Sheki]).

MATERIAL EXAMINED. 3 – 1 ♀; 23 – 1 ♂.

***Pison sericeum* Kohl, 1888**

MATERIAL EXAMINED. 5a – 1 ♀; 21 – 1 ♂; 40a – 1 ♀.

***Psammaecius punctulatus* (Vander Linden, 1829)**
*Psammaecius punctulatus*: Nemkov, 1995b: 136 (Mashtaga).

MATERIAL EXAMINED. 21 – 1 ♂; 22a – 1 ♀, 3 ♂; 22b – 1 ♂; 22c – 4 ♂; 22d – 1 ♂; 31 – 1 ♂; 32a – 1 ♂; 32b – 4 ♂; 38 – 1 ♀; 40a – 1 ♀; 48 – 1 ♀.

****Psenulus concolor* (Dahlbom, 1843)**

MATERIAL EXAMINED. 28 – 4 ♀.

****Psenulus meridionalis* de Beaumont, 1937**

MATERIAL EXAMINED. 5b – 1 ♀; 28 – 2 ♀, 6 ♂; 32a – 1 ♀, 2 ♂; 32b – 4 ♂.

****Psenulus pallipes* (Panzer, 1798)**

MATERIAL EXAMINED. 17 – 1 ♂.

****Psenulus schencki* (Tournier, 1889)**

MATERIAL EXAMINED. 18 – 1 ♀.

****Prosopigastra bulgarica* Pulawski, 1958**

MATERIAL EXAMINED. 10 – 1 ♀; 32a – 1 ♀, 3 ♂; 34 – 2 ♂; 40b – 1 ♀; 45 – 1 ♂; 46 – 1 ♀.

****Prosopigastra creon* (Nurse, 1903)**

MATERIAL EXAMINED. 10 – 1 ♂.

***Prosopigastra orientalis* de Beaumont, 1947**
*Prosopigastra punctatissima*: Gussakovskij, 1933: 164 (Kuduly near Nukha [=Sheki]).
*Prosopigastra orientalis*: Pulawski, 1979: 91 (Helenendorf [=Goygol]; Kuduly near Nukha [=Sheki]).

MATERIAL EXAMINED. 5a – 1 ♂; 10 – 1 ♂; 15 – 1 ♂; 20 – 1 ♂; 26 – 1 ♀; 28 – 2 ♂; 32a – 1 ♂; 40a – 1 ♀.

****Solierella compedita* (A. Costa, 1867)**

MATERIAL EXAMINED. 3 – 3 ♀; 9 – 1 ♂; 19 – 1 ♂.

****Solierella pisonoides* (S. Saunders, 1873)**

MATERIAL EXAMINED. 10 – 1 ♂; 19 – 1 ♀; 34 – 1 ♂.

****Solierella verhoeffi* de Beaumont, 1964**

MATERIAL EXAMINED. 3 – 1 ♂; 9 – 1 ♂.

***Sphecius antennatus* (Klug, 1845)**

*Sphecius antennatus*: Handlirsch, 1889: 452 (Helenendorf [=Goygol]; Yevlax); Nemkov, 1995a: 181 (Tash-Bulag near Nukha [=Sheki]; Kirovobad; Geokchai; Shamkhor; Kuduly; Julfa; Nakhichevan).

MATERIAL EXAMINED. 22a – 1 ♀, 4 ♂; 22b – 1 ♂; 41 – 1 ♀.

****Sphecius conicus conicus* (Germar, 1817)**

MATERIAL EXAMINED. 44 – 1 ♂.

****Sphecius conicus syriacus* (Klug, 1845)**

MATERIAL EXAMINED. 34 – 1 ♂.

***Sphecius nigricornis* (Dufour, 1838)**

*Sphecius nigricornis*: Nemkov, 1995a: 181 (Tash-Bulag near Nukha [=Sheki]; Djafarabad; 35 km north of Nakhichevan; Julfa).

MATERIAL EXAMINED. 3 – 1 ♂; 22b – 1 ♂; 22d – 1 ♂; 28 – 3 ♂; 32b – 1 ♀, 1 ♂; 41 – 1 ♂; 44 – 1 ♂; 46 – 3 ♂.

****Stizoides melanopterus* (Dahlbom, 1845)**

MATERIAL EXAMINED. 26 – 1 ♂.

***Stizoides tridentatus* (Fabricius, 1775)**

*Stizus tridentatus*: Handlirsch, 1892: 101 (Helenendorf [=Goygol]; Murut [=Ucbulaq]; Kilasi).
*Stizoides tridentatus*: Ohl, 1999: 139 (Goradiz; Gyandsha; Helenendorf [=Goygol]; Karadak [=Baku]); Nemkov, 2012c: 10 (Altan).

MATERIAL EXAMINED. 22a – 1 ♂; 26 – 1 ♀; 28 – 1 ♂; 32b – 1 ♀; 38 – 1 ♂.

****Stizus annulatus* (Klug, 1845)**

MATERIAL EXAMINED. 22b – 1 ♂; 22d – 1 ♂.

****Stizus praestans* F. Morawitz, 1893**

MATERIAL EXAMINED. 10 – 1 ♂; 40b – 1 ♂; 49 – 1 ♂.

***Stizus ruficornis* (J. Forster, 1771)**

*Stizus ruficornis*: Handlirsch, 1892: 153 (Kilasi); Nemkov, 2012a: 60 (Lenkoran).

MATERIAL EXAMINED. 11 – 1 ♀; 22a – 1 ♂; 29 – 4 ♂.

****Stizus rufiventris* Radoszkowski, 1877**

MATERIAL EXAMINED. 13 – 1 ♂.

***Tachysphex brullii* (F. Smith, 1856)**

*Tachysphex brullii*: Maharramov *et al*., 2018: 455 (Salyan, Bendovan).

MATERIAL EXAMINED. 28 – 2 ♀.

***Tachysphex consocius* Kohl, 1892**

*Tachysphex consocius*: Kohl, 1892: 218 (Helenendorf [=Goygol]); Maharramov *et al*., 2018: 454 (Shakhbuz; Ashygly).

MATERIAL EXAMINED. 9 – 1 ♀; 22b – 1 ♀, 1 ♂; 40a – 1 ♂.

***Tachysphex costae* (De Stefani Perez, 1882)**

*Tachysphex costae*: Pulawski, 1971: 419 (Baku, Machtagi); Maharramov *et al*., 2018: 456 (Sirab).

MATERIAL EXAMINED. 26 – 1 ♂.

***Tachysphex dignus* Kohl, 1889**

*Tachysphex dignus*: Maharramov *et al*., 2018: 456 (Ordubad, Dasta; Nakhichivan, Nehram).

MATERIAL EXAMINED. 22a – 1 ♀, 4 ♂; 22c – 1 ♀; 26 – 1 ♂; 31 – 1 ♂; 32a – 1 ♀; 32b – 1 ♂; 40a – 1 ♀; 46 – 2 ♂.

***Tachysphex erythropus* (Spinola, 1839)**

*Tachysphex erythropus*: Pulawski, 1971: 411; 2007: 269 (Kirovabad [=Ganja]); Maharramov *et al*., 2018: 456 (Shamkir, Shishtepe; Ganja).

MATERIAL EXAMINED. 20 – 1 ♂; 40a – 1 ♀, 3 ♂; 40b – 1 ♀, 5 ♂.

***Tachysphex fugax* (Radoszkowski, 1877)**

*Tachysphex fugax*: Pulawski, 1971: 182 (Kirovabad [=Ganja]); 2007: 292 (coast N Astara; Ganja); Maharramov *et al*., 2018: 454 (Mingechevir).

MATERIAL EXAMINED. 15 – 1 ♂; 43 – 3 ♀.

***Tachysphex fulvitarsis* (A. Costa, 1867)**

*Tachysphex dubius*: Kohl, 1888: 142 (Helenendorf [=Goygol]).

*Tachysphex fulvitarsis*: Pulawski, 1971: 95 (Koudouly near Sheki); Maharramov *et al*., 2018: 454 (Ordubad; Sheki).

MATERIAL EXAMINED. 15 – 1 ♂; 23 – 1 ♀, 1 ♂; 28 – 1 ♂; 40a – 3 ♀; 40b – 1 ♀.

****Tachysphex graecus* Kohl, 1883**

MATERIAL EXAMINED. 31 – 1 ♂; 40a – 2 ♂.

***Tachysphex helveticus* Kohl, 1885**

*Tachysphex helveticus*: Pulawski, 1971: 176 (Kousary near Kouba); Maharramov *et al*., 2018: 454 (Kusary, Avaran).

MATERIAL EXAMINED. 34 – 3 ♂; 40a – 5 ♀; 40b – 1 ♀.

***Tachysphex incertus* (Radoszkowski, 1877)**

*Tachysphex incertus*: Pulawski, 1971: 322 (Kirovabad [=Ganja]; Koudouly near Sheki; Goytepe; Lenkoran); Maharramov *et al*., 2018: 455 (Alyat; Lerik, Gosmolyan; Lerik, Gilidara; Sheki).

MATERIAL EXAMINED. 18 – 2 ♂; 21 – 1 ♀; 22b – 4 ♀, 1 ♂.

***Tachysphex laticauda* Gussakovskij, 1933**

*Tachysphex laticauda*: Pulawski, 1971: 419 (Baku, Mardakan; Baku, Machtagi); Maharramov *et al*., 2018: 456 (Baku, Mardakan; Baku, Amirjan).

MATERIAL EXAMINED. 5a – 1 ♀.

****Tachysphex liriformis* Pulawski, 1967**

MATERIAL EXAMINED. 40a – 1 ♂; 40b – 1 ♀.

***Tachysphex mediterraneus* Kohl, 1883**

*Tachysphex mediterraneus*: Pulawski, 1971: 258; 2007: 407 (near Kirovabad [=Ganja]); Maharramov *et al*., 2018: 455 (Ganja, Zazaly).

MATERIAL EXAMINED. 11 – 1 ♀; 23 – 1 ♀; 22b – 2 ♂; 34 – 2 ♂; 40a – 1 ♀, 1 ♂.

***Tachysphex mocsaryi* Kohl, 1884**

*Tachysphex mocsaryi*: Maharramov *et al*., 2018: 455 (Sharur, Akhura; Shakhbuz, Kechili).

MATERIAL EXAMINED. 21 – 2 ♂; 22a – 1 ♂, 3 ♂; 22b – 10 ♀, 2 ♂; 26 – 2 ♀, 1 ♂; 28 – 1 ♀; 40a – 2 ♀.

***Tachysphex nitidior* de Beaumont, 1940**

*Tachysphex nitidior*: Pulawski, 2007: 444 (Varafta Mts, NW Baku; W Kilyazi); Maharramov *et al*., 2018: 454 (Mingechevir).

MATERIAL EXAMINED. 9 – 1 ♀; 32b – 3 ♂; 40a – 2 ♀, 1 ♂.

***_Tachysphex nitidissimus_ de Beaumont, 1952**

MATERIAL EXAMINED. 22b – 1 ♂.

***Tachysphex obscuripennis* (Schenck, 1857)**

*Tachysphex obscuripennis*: Maharramov *et al*., 2018: 455 (Kusar, Laza).

MATERIAL EXAMINED. 27 – 1 ♂; 28 – 4 ♂; 32b – 2 ♀.

***Tachysphex panzeri* (Vander Linden, 1829)**

*Tachysphex panzeri*: Pulawski, 1971: 270 (SW Lenkoran); Maharramov *et al*., 2018: 455 (Astara, Tangerud; Lenkoran, Kergelen).

MATERIAL EXAMINED. 22a – 2 ♀; 22b – 2 ♀, 2 ♂; 22c – 1 ♀; 31 – 1 ♀, 1 ♂; 34 – 2 ♀.

***_Tachysphex persa_ Gussakovskij, 1933**

MATERIAL EXAMINED. 47 – 1 ♀.

***Tachysphex pompiliformis* (Panzer, 1804)**

*Tachysphex pompiliformis*: Maharramov *et al*., 2018: 454 (Yardymly, Avash; Belokany; Nakhchivan).

MATERIAL EXAMINED. 3 – 2 ♂; 7 – 1 ♂; 9 – 8 ♀, 2 ♂; 23 – 2 ♀; 47 – 1 ♀.

***Tachysphex psammobius* (Kohl, 1880)**

*Tachysphex psammobius*: Pulawski, 1971: 192 (Noukha); Maharramov *et al*., 2018: 454 (Kakhi).

MATERIAL EXAMINED. 23 – 1 ♂; 41 – 1 ♀.

***Tachysphex sordidus* (Dahlbom, 1845)**

*Tachysphex sordidus*: Pulawski, 1971: 419 (Baku, Machtagi); 2007: 596 (Machtagi); Maharramov *et al*., 2018: 456 (Baku, Buzovny; Baku, Lokbatan).

MATERIAL EXAMINED. 5a – 1 ♂; 13 – 1 ♀; 15 – 1 ♂; 16 – 1 ♂; 20 – 1 ♂; 22d – 1 ♂; 40b – 5 ♂; 45 – 1 ♂.

***Tachysphex tarsinus* (Lepeletier de Saint Fargeau, 1845)**

*Tachysphex tarsinus*: Maharramov *et al*., 2018: 455 (Khachmaz, Uzunoba).

MATERIAL EXAMINED. 41 – 1 ♂; 46 – 1 ♀, 1 ♂.

***Tachysphex unicolor* (Panzer, 1807-1809)**

MATERIAL EXAMINED. 4 – 1 ♀; 5b – 1 ♀; 10 – 1 ♂.

***Tachytes argenteus* Gussakovskij, 1933**

*Tachytes argenteus*: Pulawski, 1962: 399 (Kirovabad [=Ganja]).

MATERIAL EXAMINED. 25b – 1 ♂; 40a – 3 ♂; 49 – 2 ♂.

***Tachytes freygessneri* Kohl, 1881**

MATERIAL EXAMINED. 13 – 1 ♀, 3 ♂; 39 – 2 ♂; 40a – 2 ♂.

***Tachytes levantinus* Puławski, 1962**

MATERIAL EXAMINED. 21 – 1 ♀, 1 ♂; 26 – 1 ♂.

***Tachytes matronalis* Dahlbom, 1845**

*Tachytes matronalis*: Pulawski, 1962: 352 (Nakhchivan AR, Tirkech).

MATERIAL EXAMINED. 29 – 1 ♂.

***Tachytes obsoletus* (Rossi, 1792)**

*Tachytes obsoletus*: Pulawski, 1962: 346 (Kirovabad [=Ganja]; 65 km. NE Ordubad).

MATERIAL EXAMINED. 22b – 4 ♂; 23 – 2 ♂; 32a – 2 ♂; 32b – 1 ♂; 34 – 1 ♂; 45 – 1 ♀.

***Tachytes panzeri* (Dufour, 1841)**

*Tachytes europaeus*: Pulawski, 1962: 340 (Kirovabad [=Ganja]; Tash-Bulag and Zaragay near Nukha [Sheki]; Lenkoran).

MATERIAL EXAMINED. 15 – 1 ♂; 18 – 2 ♂; 22b – 1 ♂; 23 – 1 ♂; 28 – 1 ♀, 1 ♂; 31 – 1 ♀; 32a – 2 ♂; 32b – 1 ♀, 2 ♂; 34 – 3 ♂; 39 – 2 ♂; 42 – 1 ♀; 49 – 1 ♀.

***Trypoxylon deceptorium* Antropov, 1991**

*Trypoxylon deceptorium*: Antropov, 1991: 677 (Chukhuryurt; Zanzagur Range; 35 km north of Nakhichevan).

MATERIAL EXAMINED. 31 – 1 ♂.

***Trypoxylon megriense* Antropov, 1985**

*Trypoxylon megriense*: Antropov, 1991: 681 (Belokany; Chukhuryurd; Nakhchivan).

MATERIAL EXAMINED. 9 – 1 ♂; 18 – 1 ♂; 23 – 1 ♂; 28 – 6 ♂; 32a – 1 ♂; 32b – 2 ♂; 41 – 1 ♀.

***Trypoxylon scutatum* Chevrier, 1867**

*Trypoxylon scutatum*: Gussakovskij, 1936: 647 (Kusary [=Qusar city]); Antropov, 1989a: 56 (Azerbaijan).

MATERIAL EXAMINED. 22b – 1 ♀, 2 ♂; 27 – 1 ♂; 28 – 1 ♀, 4 ♂; 32b – 1 ♂; 34 – 1 ♀, 1 ♂; 40a – 1 ♀, 2 ♂; 46 – 1 ♂.

***Trypoxylon tobiasi* Antropov, 1989**

*Trypoxylon tobiasi*: Antropov, 1989b: 309 (35 km north of Nakhichevan).

MATERIAL EXAMINED. 32b – 1 ♂.

## CONCLUSION

In present paper we list 187 species of 42 genera of digger wasps from Nakhchivan Autonomous Republic, with 116 species recorded from Azerbaijan for the first time. Now 231 species of Crabronidae are known from this country. The number of Azerbaijani Crabronidae species is supposed to be at least twice higher than known so far. Probably several species that are known from neighboring Iran, Armenia, Georgia, Turkey or North Caucasus regions of Russia also occur in Azerbaijan.

Additionally, a new synonymy is proposed for *Ectemnius persicus* (Kohl, 1888) = *E. walteri* (Kohl, 1889). Redescription of female and description of hitherto unknown male of *Oxybelus latifrons* Kohl, 1892 are given also.

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